

# PATENT COOPERATION TREATY


## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 02 MAR 2006
WIPO PCT

Applicant's or agent's file reference 305010WO/DJW/JT		<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. PCT/IB2005/000338		International filing date (day/month/year) 09.02.2005		Priority date (day/month/year) 11.02.2004
International Patent Classification (IPC) or national classification and IPC H03F1/08, H03F1/02, H03F3/19, H03C1/06				
Applicant NUJIRA LIMITED et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 12.12.2005		Date of completion of this report 01.03.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Dietsche, S  Telephone No. +49 89 2399-		



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

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PCT/IB2005/000338

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-11 as originally filed

**Claims, Numbers**

1-15 as originally filed

**Drawings, Sheets**

1/5-5/5 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	3,4, 13
	No: Claims	1,2,5-12,14,15
Inventive step (IS)	Yes: Claims	none
	No: Claims	1-15
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	none

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

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**1. The following documents will be referred to in this written opinion:**

D1 = US-A-5 748 042      D2 = US-A-5 406 224      D3 = US-A-5 760 650  
D4 = US-A-6 137 358

**2. With reference to item VIII, the examiner is of the preliminary opinion that the application does not meet the requirements of Art. 6 PCT, because the subject-matter of the claims 1, 13 and 14 is unclear.**

2.1 The subject-matter of the claims 1, 13 and 14 is unclear due to the not further defined relative term "low" (cf. PCT-Guidelines, 5.34). With particular reference to the Guidelines, it is noted that such an unclear term can not be used "to distinguish the claimed invention from the prior art".

**3. With reference to item V, the examiner is of the provisional opinion that the application does not meet the requirements of Art. 33 (2) and (3) PCT, because the subject matter of the claims 1-15 is either not new or does not involve any inventive step.**

3.1 The subject-matter of claim 1 is not new in view of each of the documents D1-D3.

3.1a The document D1 discloses (the references in parentheses applying to this document) "a power amplifier (fig. 2 and 4) including a resistive element (32) connected at an output thereof (drain of 22) to maintain a *low* impedance at the output across a range of operational frequencies (col. 1, line 25-34)".

3.1b The document D2 discloses (the references in parentheses applying to this document) "a power amplifier (fig. 1) including a resistive element (R1) connected at an output thereof (drain of 12) to maintain a *low* impedance at the output across a range of operational frequencies (col. 3, lines 23-32)".

3.1c The document D3 discloses (the references in parentheses applying to this document) "a power amplifier (fig. 1 and 2) including a resistive element (161, 162) connected at an output thereof (drain of 150) to maintain a *low* impedance at the

output across a range of operational frequencies (col. 4, lines 35-55 in combination with claim 3, lines 45-47)".

- 3.2 The document D4 discloses (the references in parentheses applying to this document) "a power amplifier (fig. 1) comprising a transistor for receiving a signal to be amplified at an input and for outputting an amplified signal at an output (col. 2, lines 47-52); and a modulated power supply (220, 270) connected to the transistor output (col. 3, lines 6-8).

Thus, the subject-matter of claim 13 differs from the arrangement known from D2 merely in that the amplifier further comprises

- "a resistive element connected at the transistor output such that a *low* impedance is maintained at the transistor output across a range of operational frequencies".

It is noted that the document D2 does not disclose any particular amplifier for the RF amplifier (260) used in the arrangement of fig. 1, but merely suggests that "the power amplifier (260) is a field effect transistor amplifier (col. 2, lines 50-52)" whose drain bias is amplitude modulated (col. 3, lines 6-8).

Thus, the skilled person faced with the problem of realising the amplifier arrangement known from D2 would consider any suitable RF amplifier, e.g. one of the RF amplifiers known from D1-D3, and thus arrive at the subject-matter claimed in claim 13 without any inventive skill. Therefore, the subject-matter of claim 13 does not involve an inventive step.

- 3.3 The subject-matter of the independent method claim 14 is not new for substantially the same reasons as elaborated above with respect to the corresponding independent apparatus claim 1 (cf. point 3.1).

- 3.4 With respect to the subject-matter of the dependent claims 2-12 and 15, it is noted that the subject-matter of

- claim 2 is not new in view of each of the documents D1-D3,
- claims 3 and 4 does not involve an inventive step (cf. point 3.2),

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- claims 5-8 is not new in view of each of the documents D1-D3,
- claim 9 is not new in view of the documents D3, and does not involve an inventive step in view of each of the document D1 and D2,
- claims 10-12 and 14 is not new in view of each of the documents D1-D3.

**4. With respect to item VII, the present application contains the following defects:**

- 4.1 Contrary to the requirements of Rule 6.3 b) PCT, the independent claims are not drafted in the two-part form, with those features being known from the closest prior art document (D1) being placed in the preamble of the claim, and new features being placed in the characterising portion of the claim (cf. PCT-Guidelines, paragraph 5.05).
- 4.2 Contrary to the requirements of Rule 6.2 b) PCT, the present set of claims does not contain reference signs to increase the intelligibility of the claims (cf. PCT-Guidelines, paragraph 5.11).